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(71) Applicant(s)

Matthew Michael Burns
Pantiles Cottage, 18 Clifford Manor Road, Guildford,
SURREY GU4 8AG, United Kingdom

(72) Inventor(s)

Matthew Michael Burns

(74) Agent and/or Address for Service

Williams, Powell & Associates
4 St Paul's Churchyard, LONDON, EC4M 8AY,
United Kingdom

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(58) Field of Search

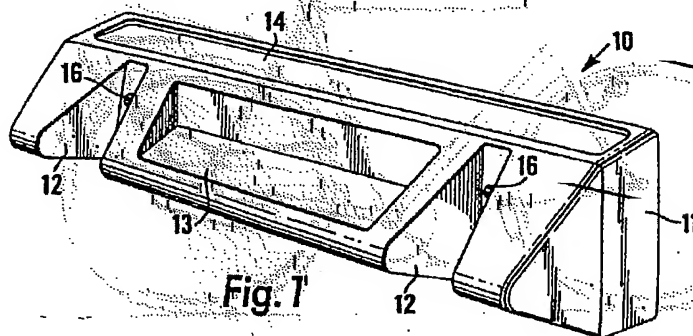
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(54) Bicycle support

(57) A bicycle support (10) of moulded plastics material is arranged to be attached to a wall and has one or more vertical slots (12) to receive a bicycle wheel. The slots (12) are tapered and are arranged on each side of a shelf (13) or tool box. Hooks may be provided at the bottom of the support.



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At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

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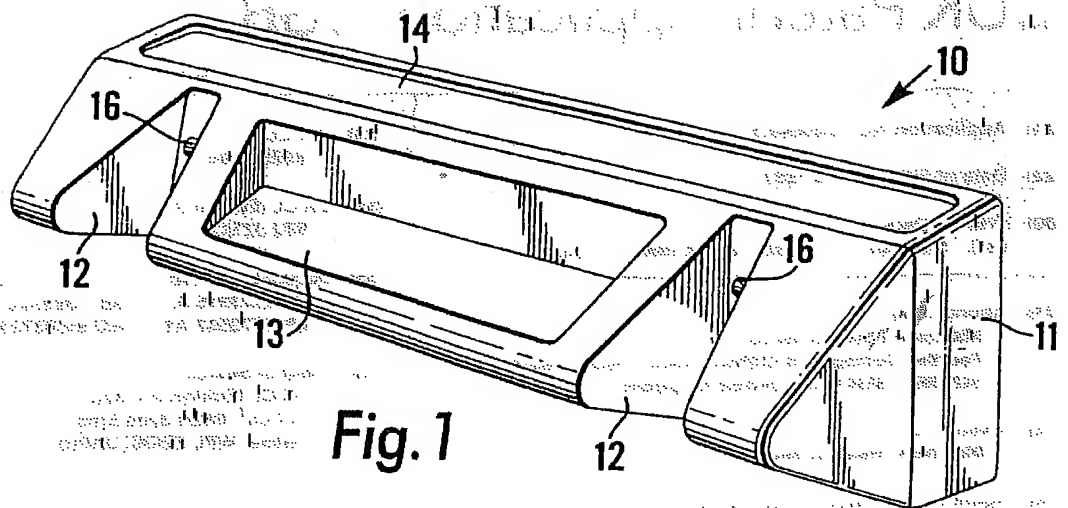


Fig. 1

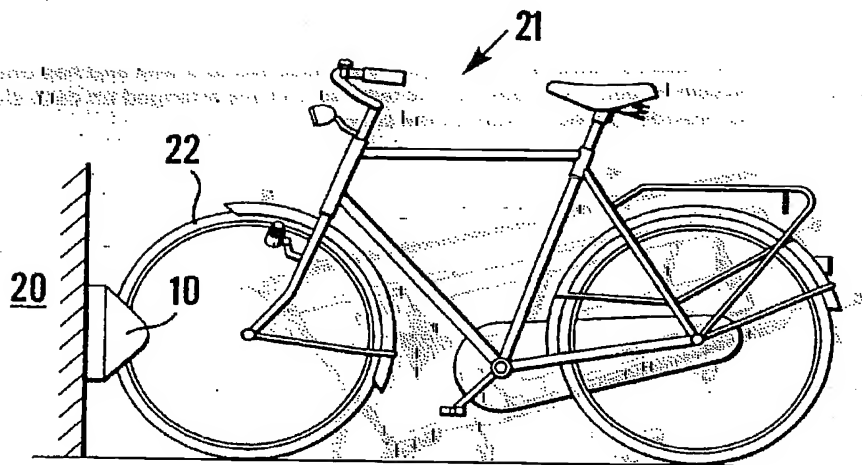


Fig. 2

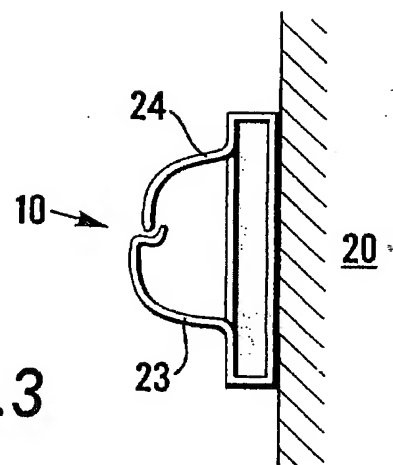


Fig. 3

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BICYCLE SUPPORT

This invention relates to a bicycle support which can be used as a storage and/or parking device.

Bicycles are inherently unstable and are difficult to place into a position in which they can be left securely and safely supported but ready for use.

Usually when stored at home, a cycle is propped against a wall or simply put sideways on the ground. Domestically, the usual place where the bicycles are kept is in a garage, where they usually take up too much space when not being used. Left like this, they are untidy and can be damaged.

Existing bicycle supports are made of frames or brackets made of bent metal rods. These are unsightly and generally cause an obstruction since they have many projections which can catch the clothing of someone passing by.

The present invention seeks to provide a low-cost solution to this storage problem.

According to the present invention, there is provided a bicycle support comprising a moulded member arranged to be secured to a wall or other generally vertical surface and defining at least one tapered slot arranged to receive the wheel of a bicycle.

Thus in embodiments of the invention, the bicycle is supported by a special wall-mounted bracket. The bracket is located approximately 0.6m (two feet) up the wall, holding the bicycle in position upright when not in use. The cycle is located into a special "push fit" slot shaped in the moulded unit which is preferably designed to be able to accommodate a pair of bicycles of any type, e.g. mountain bike or racing bike.

A preferred embodiment of the present invention will now be

described, by way of example only, with reference to the accompanying drawings, of which:

Figure 1 shows a perspective view of a bicycle support according to the invention;

Figure 2 shows a side view of the support of Figure 1, in use; and

Figure 3 is a cross-section of a modified bicycle support.

Figure 1 shows a bicycle support or bracket 10 in accordance with the present invention comprising a moulded plastic member 11 having a slot 12 at each end. Member 11 is moulded in one piece and is preferably vacuum formed. Other construction methods may be chosen.

Preferred ranges of the dimensions of the slot are depth 5 to 10 cm (preferably 7.5 cm); maximum width 4 to 7 cm (preferably 5 cm).

The moulding defines a shelf which can be used to hold a variety of items such as a security lock, oil, puncture repair kit and so on. A top tray or shelf 14 is arranged to hold items which may be useful to keep handy for bicycles. Hooks (not shown) may be moulded into the plastic at the bottom of member 11; larger items can be hung from these hooks.

In order to fix the unit to the wall, holes 16 are provided which are large enough to take suitable screws and spacers so that the whole unit is mounted securely on the wall at about wheel hub height. This is shown in Figure 2 in side elevation, where a unit 10 is attached to a wall 20 and holds the front wheel 22 of a bicycle 21. The location of the holes 16 at the base of the slots 12 assures a secure attachment to wall 20 and avoids the screw-heads projecting

from the unit 10 and possibly catching clothing as someone passes by.

In use, the unit 10 allows a bicycle to be pushed into a slot 12 and to be held there by friction, i.e. by an interference fit or wedging effect. Most of the bicycle's weight is taken by the ground, so the unit is able to hold the bicycle wheel firmly without play. The unit is so designed that it can accommodate two cycles side by side. If the handle bars are too close, one of the bicycles can be turned round and the back wheel put into one of the slots. Of course, if desired, two bicycles may be parked each with their rear wheel held in a respective slot 12; this provides a very stable arrangement. The slots are tapered to grip the tyre of every size and type of wheel commonly found, and the angle lies within the range 10° to 30° .

The unit 10 permits easy storage of a bicycle and also forms a convenient holding arrangement while the bike is being cleaned. The unit is light, easily transported and has a pleasing smooth appearance with no sharp edges or inconvenient projections.

Various modifications may be made to the above-described arrangement. The support unit 10 may have only a single slot 12; alternatively it can have three or more slots. One of the shelves may be replaced by a tool box with a pivotal lid. Such an arrangement is shown in Figure 3 in which shelf 13 is replaced by a tool box 23 having a lid 24 pivoted at the top of the bicycle support 10. This permits the safe storage of spanners, nylon brushes and cleaning materials for maintenance.

For certain applications it is envisaged that non-tapered, i.e. straight-sides, slots 12 could be provided.

The preferred plastics materials for the support 10 are

polypropylene or an ABS material and this may be coated with a finish which resembles carbon fibre finish.

In a modified version (not shown), a slot 12 may be provided in the side of a moulded body 11 which projects at 90° from a wall, allowing a cycle 21 to be held generally parallel to the wall 20. Slots 12 may be provided on both sides so that two cycles can be held facing each other.

CLAIMS

1. A bicycle support comprising a moulded member arranged to be secured to a wall or other generally vertical surface and defining at least one tapered slot arranged to receive the wheel of a bicycle.
2. A support according to claim 1, having a longitudinal axis which is arranged to be substantially horizontal in use, wherein a plurality of wheel-receiving slots are arranged along said longitudinal axis.
3. A support according to claim 2, wherein there are two wheel-receiving slots arranged respectively adjacent to ends of the support.
4. A support according to any preceding claim, wherein the angle between the walls of the each slot lies in the range 10° to 30° .
5. A support according to claim 4, wherein the angle is substantially 17° .
6. A support according to any preceding claim, wherein a shelf is provided at the level of the top of each slot.
7. A support according to claims 3 and 6, wherein the shelves are provided between the two slots.
8. A support according to any of claims 1 to 5, wherein a box member having a lid is provided at the level of the top of each slot.
9. A support according to claims 3 and 8, wherein the box member is provided between the two slots.
10. A support according to any preceding claim, having a top surface defining a top shelf.

11. A bicycle support substantially as herein described with reference to Figs. 1 and 2 or Fig. 3 of the accompanying drawings.